

March 12, 1998

MEMORANDUM FOR TREASURY BUREAU CHIEF INFORMATION
OFFICERS

FROM: James J. Flyzik /s/
Deputy Assistant Secretary (Information Systems)
and Chief Information Officer

Constance E. Craig /s/
Assistant Commissioner (Information Resources)
and Co-Chair, Chief Information Officers Council

SUBJECT: Approval of the Competency Framework for Chief
Information Officers (CIO) and Direct Reports

Attached is the approved Competency Framework for CIOs and Direct Reports for the Department of Treasury. The Clinger-Cohen Act of 1996 requires each agency to “assess the requirements established for agency personnel regarding knowledge and skill in Information Resources Management (IRM) and the adequacy of such requirements for facilitating the achievement of the performance goals established for IRM.”

This document represents the culmination of a process which was validated by the 58 top technology officers in the Treasury Department. The IT Skills Enhancement Subcommittee to the Treasury CIO Council contracted with the University of Maryland Business School to conduct a group field project to produce this competency framework. The approved document enhances and clarifies the Federal CIO Council core competencies. These enhanced competencies provide an objective framework for the assessment and development of key IT decision-makers at the CIO level, and the level immediately below.

Assessing and investing in the development of these key personnel will improve Treasury’s effectiveness in using IT, investing in it wisely, and measuring its performance in meeting expected outcomes. The competencies will be used to conduct annual assessments to assure Clinger-Cohen compliance. Bureaus may wish to use the competency framework as the basis for filling top information systems positions in the future.

If there are any questions regarding this framework, please direct them to Fred Thompson, the Program Manager for IT Workforce Improvement. He can be reached at 202-622-1557.

Attachment

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COMPETENCY FRAMEWORK FOR CIOs AND DIRECT REPORTS

(Revised 9/98)

HIGH-LEVEL COMPETENCY FRAMEWORK:

1.0 Policy and Organization

1.1 Mapping IT to Mission

Align IT activities with the business of the Department and the bureaus and define strategies and goals that meet the requirements of the customer, the bureaus and the Department.

1.2 Budget Process

Understand and participate in budget formulation processes to help obtain resources for IT projects, prioritize IT projects in light of overall Department priorities and objectives.

1.3 Organizational Process

Participate in the development of organizational operations to increase the visibility of IT and emphasize the role that IT can play in effectively supporting bureau and Department operations.

2.0 Capital Planning Competencies

2.1 Investment Assessment

Determine the relative benefit of various investments to provide the most cost effective, complete service to citizens and customers, determine and justify the best ways to spend scarce resources to achieve strategic goals.

2.2 Acquisition

Develop, maintain and continuously improve the IT procurement process, make all aspects of acquisition decisions in light of Department strategy, mission and goals, as well as investment assessment.

2.3 Implementation and Performance Measures

Work toward assuring effective implementation of IT in all projects and initiatives, determine the most effective way to assess IT performance in light of Department and bureau resources, goals and mission.

3.0 Managerial Competencies

3.1 Leadership

Provide overall direction for IT staff by fostering a positive work environment where groups or individuals can successfully complete complex tasks, develop and/or champion new ideas.

3.2 Process Management

Continually monitor and improve Department or bureau operations through reengineering and implementation of best practices.

3.3 People Management

Effectively utilize teams and motivate individuals to perform successfully, allocate human resources to effectively achieve goals and successfully complete activities.

4.0 Technical Competencies

4.1 Information systems architectures (client/server, collaborative processing, telecommunications)

Develop, maintain, and facilitate the implementation of a sound and integrated information system architecture as mandated by Federal Information Technology (IT) legislation.

4.2 Developing technologies

Keep abreast of the latest IT developments (software, hardware, communications) both inside and outside government.

4.3 Information delivery technology (Internet, Intranet, kiosks, etc.)

Plan and implement different methods in delivering information to customers or the public.

4.4 Security policy, disaster recovery and business resumption

Establish security policy and requirements, determine where possible weaknesses exist, and develop/implement plans to recover if there is a breach in system security.

4.5 System life cycle

Employ the standards, policies and practices to guide a technology investment from the concept stage through implementation, operation and review.

4.6 Software development

Develop software programs or processes to manipulate data or perform tasks.

DETAILED COMPETENCY FRAMEWORK

1.0 POLICY AND ORGANIZATION

1.1 Mapping IT to Mission—Align IT activities with the business of the Department and the bureaus and define strategies and goals that meet the requirements of the customer, the bureaus and the Department.

1.1.1 Business strategy assessment—Conduct strategic analysis, propose action plans, and evaluate results of strategic moves.

Analyzes changes in the regulatory, political or technical environments and assesses their influence on the current business strategy.

1.1.2 Business practices—The role of IT in supporting all business operations.

Regularly communicates with bureaus to assess how effectively current IT systems support their operations.

1.1.3 Customer knowledge—Knowledge of customers' businesses and missions.

Understand customer needs and takes them into account when making decisions.

Meets regularly with customers to learn about their issues and concerns.

1.1.4 Customer learning—Help customers manage expectations for technology.

Teach customers how to articulate their needs, define their requirements and ask the right questions.

Understand customers' business needs and how IT can support them.

1.1.5 Customer service practices—Basic customer service principles and the role of IT in servicing agency customers effectively.

Regularly communicates with departments that have direct customer service functions to assess how effectively current IT systems support their operations.

1.1.6 Inter- and intra-departmental IT functional analysis—How IT is integrated into multiple departments, bureaus or functions (finance, enforcement, customer service).

Institutes standards regarding how technology needs should be documented.

Establishes bureau-level expectations that support the Department's overall mission and IT strategy.

Brings together representatives from different functional areas as part of the IT planning process.

1.1.7 IT's strategic implication—Evaluate the use of IT in achieving strategic alignment among bureaus within the Department to achieve strategic goals (fighting crime, improving economy, collecting revenues).

Understands how various IT components support the Department's mission, goals and

strategic plan.

1.1.8 Overall agency strategic planning—The process of developing and implementing a Department wide strategic plan.

Participates in Department wide strategy sessions.

Identifies Department and bureau goals or objectives.

1.2 Budget Process —Understand and participate in budget formulation processes to help obtain resources for IT projects, prioritize IT projects in light of overall Department priorities and objectives.

1.2.1 Federal government budget process—The budget development process between bureau, Department, executive and legislative branches.

Participate in budget crafting, Capital Hill discussions and OMB processes.

1.2.2 Financial practices—Basic financial management principles.

Consults with CFO to insure that IT system development plans incorporate standard financial practices.

1.2.3 Integrating performance with mission and budget process (performance-based budgeting)—How a technology's or system's performance helps the bureau or department achieve its mission and how this compares to other items in the budget.

Conducts performance-based budgeting in submitting annual budget request.

Allocates available resources among projects by assessing the extent to which system performance furthers an organizational mission.

1.3 Organizational Process—Participate in the development of organizational operations to increase the visibility of IT and emphasize the role that IT can play in effectively supporting bureau and Department operations.

1.3.1 Department/bureau organization, function, policies, procedures—How the Department is structured, what the bureaus do and how tasks are accomplished.

Shows an understanding of the Department/bureau's mission in dealing with others.

Understands the structure of the Department/bureau and the relationships between functions.

Demonstrates a working knowledge of the existing technical infrastructure of the organization.

1.3.2 Federal government decision-making and policy planning process (political and administrative)—How decisions are made in the agency, in the federal government as a whole, and in Congress, and some of the main considerations in making them.

Participates in government-wide and agency committees that analyze policy issues (e.g., CIO Council).

Communicates regularly with senior Department officials and/or Congressional liaison to convey opinions or gain information.

Analyzes the impact of current/proposed legislation on the Department/bureau mission or strategic plan.

1.3.3 Financial systems—Role of IT in supporting financial systems and operations, and how financial systems must interface with other IT systems.

Regularly communicates with financial executives and CFO to assess operational IT needs.

1.3.4 Governing laws and regulations (Clinger-Cohen, GPRA, FASA, PRA, privacy, security, FOIA)—Legislative process and proposed/approved new laws or language that effect the Department's operation.

Complies with federal laws and regulations.

Identifies new reporting or operating requirements of policies, laws or regulations.

Oversees Department/bureau's compliance and emphasizes to others the need for compliance.

1.3.5 Intergovernmental, Federal, state, local projects—IT developments, programs or policies in other Federal, state or local agencies.

Regularly attends meetings or professional events designed to share IT information practices.

Reads current publications discussing government IT initiatives.

1.3.6 Linkages and interrelationships among bureau directors, COO, CIO, CFO—

Connections between different missions and functional areas (financial management, enforcement, information management) both within an agency, and between agencies, including the flow of information or funds.

Aligns IT policies and resources with functional areas.

Facilitates regular intra-and inter-bureau communications between directors and functional area leaders.

Identifies shared benefits for other agencies.

1.3.7 Stakeholder relationships—Relationships with external stakeholders (GAO, legislative branch, other executives, businesses).

Meets with stakeholder groups to learn about issues and address concerns to create buy-in for IT plans.

Communicates understanding of different ways others examine IT issues and analyze possible benefits of IT in this context.

2.0 Capital Planning Competencies

2.1 Investment Assessment—Determine the relative benefit of various investments to provide the most cost effective, complete service to citizens and customers, determine and justify the best ways to spend scarce resources to achieve strategic goals.

2.1.1 Alternative functional approaches (necessity, government, IT) analysis—Different ways to analyze the multiple factors that drive the need to acquire new IT systems or technologies.

Assesses whether there is an existing government solution instead of having to buy or build one.

Assesses whether a change in policy or process might provide solution.

2.1.2 Business case analysis—A structured decision making process in which a person can enter a scenario (needs/problems, constraints, possible alternatives) and arrive at a possible decision.

Utilizes decision modeling software for IT planning and analysis.

Establishes standards or criteria based upon which IT investment decisions will be made.

2.1.3 Capital investment analysis models and methods—Techniques to evaluate the profitability or benefits of undertaking a capital investment project (net present value, equivalent annual cost, payback period).

Requires that capital investment plans include multiple analyses of the costs, benefits and life of acquisitions.

2.1.4 Investment review process—The series of logical steps used to consider proposed IT investments.

Establishes formal IT investment review process.

Requires all IT investments to pass through review process to insure appropriate use of federal funds.

2.1.5 IT planning methodologies—The different ways an agency or the Department assesses the need for IT systems and technologies.

Conducts or oversees a comprehensive IT planning process that provides multiple viable alternatives.

2.1.6 Measuring the business value of IT—Concrete, repeatable measures that can identify the impact of the technology on an agency's operations, output, customer service or other functions (quantitative proof or documentation).

Defines and selects criteria to measure and evaluate performance.

Oversees or conducts regular performance measurement analyses.

2.1.7 Risk analysis and management models and methods—Decision making techniques (often statistical) that are applied to decision making under risk situations to determine how likely an event is to occur.

Identifies factors that may jeopardize the success of a project or system, assesses the likelihood of their occurrence, and develops ways to deal with them.

2.1.8 Weighing investment levels and benefits of alternative investments (best value cost-technical tradeoff, cost as an independent variable, economic)—Different ways to evaluate the costs, benefits, operations, capabilities of possible technologies and assess what kind of performance the agency can expect for different expenditures.

Requires detailed analyses to be performed for all possible IT solutions.

Makes IT investment and planning decisions on the basis of cost, economic and capability data.

2.2 Acquisition—Develop, maintain and continuously improve the IT procurement process, make all aspects of acquisition decisions in light of Department strategy, mission and goals, as well as investment assessment.

2.2.1 Acquisition/contract management—Institutionalize and build the collaborative relationship that should exist with the private sector, and among procurement officers, CFO, CIO, strategic planners.

Establishes open communications with contractors, and is aware of private sector issues and concerns.

2.2.2 Alternative acquisition models (franchising, contracting, outsourcing, privatization, performance-based contracting)—Different ways that an agency can obtain IT systems or equipment.

Requires multiple alternative acquisition models to be considered for each major acquisition plan.

2.2.3 IT acquisition best practices—Processes or systems identified in either government or private sector that are widely recognized to improve efficiency or cost of IT acquisition.

Reads/researches current IT industry publications.

Accepts input from others with knowledge of IT acquisition.

Applies best practices where appropriate.

2.2.4 Streamlined acquisition processes (GWAC, IDIQ, etc.)—An IT acquisition process contains no unnecessary steps or inordinate delays.

Utilizes software packages to enhance the management of contracting process.

Drafts clear and focused Statements of Work or RFPs.

Holds staff accountable for maintaining a fair and efficient acquisition process.

2.3 Implementation and Performance Measures—Work towards assuring effective implementation of IT in all projects and initiatives, determine the most effective way to assess IT performance in light of Department and bureau resources, goals and mission.

2.3.1 Contingency planning—A backup plan, system or procedure in case the preferred plan or system does not work or must be changed.

Establishes accountability/responsibility for operation of IT systems.

Oversees development of alternative plans.

2.3.2 Investment tracking—A regular process to assess the cost of maintenance after IT acquisition.

Establishes and uses standard steps to measure the performance and maintenance needs of IT systems.

Uses financial analysis to continually revise costs of an IT investment based upon maintenance needs and lifecycle information.

2.3.3 Managing IT reviews and oversight process—A means to regularly review IT systems and technologies (frequency, method) and assess their management and operation in the context of agency needs and other systems.

Conducts frequent, regular IT reviews.

Maintains a well-structured IT review process.

IT review process incorporates results from other IT activities (needs assessment, agency mission and responsibilities).

2.3.4 Monitoring and measuring new system development—when and how to pull the plug—When the investment in a new system will exceed the possible benefits from it due to high risks or cost and resource overruns.

Oversees development process for IT systems.

Weights level of resources being committed to specific system development initiatives against projected system benefits.

2.3.5 Monitoring, evaluation and assessment methods and techniques—Mechanisms the agency will use to measure the impact and success of a system, project or technology.

Conducts baseline assessment of current technology before initiating changes.

Establishes procedures for evaluating IT plans or proposals.

Participates in long-term strategic planning process.

2.3.6 Performance based contracting—Evaluate the successfulness of a contract using scientific methods, such as performance metrics.

Establishes standard measures to evaluate contracts (including whether they are on time, on budget, high quality, etc.).

2.3.7 Pilot/start-up activities—Sequential rollout and/or testing prior to implementation to insure that IT systems meet technical and functional requirements.

Requires bureau/Department to conduct pilot tests as part of most new system implementation.

Establishes guidelines covering how new system implementation should occur.

2.3.8 Post-award IT contract management models and methods—Different ways to effectively manage contracts to achieve the desired outcome.

Conducts ongoing measurement of effectiveness and success of contract process.

Requires regular reports on status of each IT acquisition contract.

2.3.9 Processes and tools for creating, administering and analyzing user needs.—

Methodology for creating unbiased processes to collect data and correctly analyze the results.

Makes regular use of survey forms as a data collection tool.

Provides detailed methodology to describe data collection procedures and explanations for results.

3.0 Managerial Competencies

3.1 Leadership—Provide overall direction for IT staff by fostering a positive work environment where groups or individuals can successfully complete complex tasks, develop and/or champion new ideas.

3.1.1 Communication—The ability to communicate within the agency and the Department, and with other stakeholders.

Knows who to communicate with to obtain information, or to suggest ideas for new IT programs or systems.

Understands and utilizes the best type of communication for different groups of people.

3.1.2 Effective project/program management—Planning, analysis, budgeting, resource allocation, personnel management tasks required to successfully complete projects.

Creates or requires viable and detailed project plans.

Requires regular updates of project status relative to plans.

3.1.3 Innovation, creativity and vision—New ways to use IT to deliver services and to integrate IT into bureau or Department mission and goals.

Conducts brainstorming sessions with coworkers and/or subordinates.

Acts as a bureau/Department champion for new ideas.

3.1.4 Problem solving/crisis management skills—How to deal with unexpected problems/crises, both with people and with systems

Communicates regularly with coworkers and subordinates to remain aware of current tasks and potential problems.

Reacts quickly to suggest solutions to problems.

3.1.5 Sales and marketing—Sell programs or ideas so that they become part of the bureau or Department budget and IT plans.

Identifies most effective way to promote new ideas to others within the bureau/Department.

Knows who to approach to have new ideas considered for inclusion in the budget, or for implementation.

3.2 Process Management—Continually monitor and improve Department or bureau operations through reengineering and implementation of best practices.

3.2.1 Business process redesign/reengineering models and methods (including quality improvement)—Techniques to change specific operations in an agency or the Department to improve efficiency, quality, service or other factors.

Reviews new technologies to determine if they can offer process improvements.

Provides stretch goals or other motivation for changing agency operations.

3.2.2 IT best practices—Processes, technologies or systems from either the public or private sectors that are known to improve performance, costs or efficiency.

Follows current IT industry research and innovations.

Regularly reassesses current operations based upon descriptions of industry best practices.

3.2.3 Modeling and simulation tools and methods—Proven techniques to predict how alternate plans will affect a bureau's or the Department's operations.

Demonstrates an understanding of modeling tools.

Requires simulations or models of effectiveness before making major IT acquisition or implementation decisions.

3.2.4 Techniques/models of organizational development and change—Models to overcome resistance to change to alter the factors that affect a bureau's or the Department's ability to improve its operating procedures.

Aligns resources (money, people, time) appropriately for bureau/Department mission and tasks.

Supports/creates a mechanism or system for employees to share information.

Reads/researches current theories regarding effective organizational structure and management.

3.2.5 Techniques/models of process management and control—Techniques for measuring how well individuals manage and control operations for which they are responsible.

Establishes clear accountability for tasks and operations.

Uses software tools (project management, scheduling, document management) to streamline operations.

Makes well-informed decisions.

Provides a clear outlet for others to share ideas.

3.3 People Management—Effectively utilize teams and motivate individuals to perform successfully, allocate human resources to effectively achieve goals and successfully complete activities.

3.3.1 Competency testing—standards, certification, performance assessment—Methods to insure that employees have the necessary skills to do their job effectively.

Uses self-assessments to determine skill gaps.

Conducts regular assessments of current employees to insure that the workforce maintains the necessary skills to design and operate IT.

3.3.2 Defining roles, skill sets and responsibilities of senior IRM officials, CIO, IRM staff and stakeholders—How each group fits into the mission and operations of the Department or bureau through their responsibilities, and what skills each must have to do his/her job successfully.

Establishes clear priorities for staff.

Develops a management model under which the organization will operate.

3.3.3 Human resource allocation—Ways to allocate human resources to take advantage of skills, personalities and accomplish objectives.

Hires appropriate people (internal or contract) to meet Department or bureau goals.

Reviews staffing patterns for effectiveness.

Effectively delegates tasks.

3.3.4 Partnership/team-building techniques—Ways to influence and relate to superiors and subordinates to help people work with one another.

Creates interdisciplinary teams to capitalize talent.

Freely shares information with others.

Presents a positive image of self and the Department/bureau to people within and outside the organization.

Willingly works with others both within and outside the organization.

3.3.5 Performance appraisal—Performance assessments that offer suggestions to help employees accomplish their responsibilities successfully.

Conducts regular appraisals with employees.

Uses employee input and own experience to set goals for employees that align with bureau/Department needs and goals.

3.3.6 Performance management techniques—Ways to motivate people to take initiative, do their jobs successfully and improve their skills in order to achieve objectives.

Values high quality performance, and the contributions of talented employees in the organization.

Establishes development plans for staff.

Empowers staff with the appropriate authority needed to function effectively.

Provides performance feedback to others.

3.3.7 Teamwork—Encourages employees to work together with others outside of their divisions or functional areas to complete specific tasks.

Select and form teams to achieve goals.

Foster communication and coordinate performance within and among teams.

4.0 Technical Competencies

4.1 Information systems architectures (client/server, collaborative processing, telecommunications)—Develop, maintain, and facilitate the implementation of a sound and integrated information system architecture as mandated by Federal Information Technology (IT) legislation.

Regularly employs existing standards in developing new IT systems and IT networks.

Comprehends Department wide and bureau needs, and what bureaus should do to comply with the department's architectural plan.

Understands what comprises an enterprise information system.

4.2 Developing technologies—Keep abreast of the latest IT developments (software, hardware, communications) both inside and outside government.

Reads industry publications, applies as appropriate, and communicates within the organization regarding use of information.

Meets with IT vendors to gather updates on technology and disseminates information appropriately in the organization.

4.3 Information delivery technology (Internet, Intranet, kiosks, etc.)—Plan and implement different methods in delivering information to customers or the public.

Ensures that the bureau/Department maintains efficient use of technology to deliver information (e.g., Internet).

Develops and maintains a plan for future delivery systems.

4.4 Security policy, disaster recovery and business resumption—Establish security requirements and policies, determine where possible weaknesses exist, and develop/implement plans to recover if there is a breach in system security.

Requires regular security risk analyses.

Develops understandable security policies and procedures.

Establishes a policy for dealing with security threats/risks.

4.5 System life cycle—Employ the standards, policies and practices utilized to guide a technology investment from the concept stage through implementation, operation and review.

Displays knowledge of SLC principles and follows SLC practices.

4.6 Software development—Develop software programs or processes to manipulate data or perform tasks.

Demonstrates an understanding of the use of software development methods and tools.

Exhibits conceptual knowledge of how applications are designed and implemented.